

## Let's Ask a Question

Teacher questions when planning for instruction at any point in a unit:

Where can I use this question?

When in the unit can I use it?

How does the question support what I am teaching?

What math content is involved?

What math skills does the question develop/extend?

What challenges may students face as they try to respond to the question?

What are the ways to determine what students are learning?

How does the question support mastery learning and math proficiency?

Have I modeled the expected discourse and use of terminology?

### Teacher questions/observation prompts

Tell me everything you know about \_\_\_\_\_?

What do you see?

What do you notice?

What makes this a \_\_\_\_\_ number?

How are \_\_\_\_ and \_\_\_\_ similar? Different?

Can you name another \_\_\_\_\_? What do we call \_\_\_\_\_?

Which number is the \_\_\_\_\_?

How are \_\_\_\_\_ and \_\_\_\_\_ related?

How do you know?

Justify your thinking.

Explain your reasoning.

What would happen if ...?

Is there another way we can write this?

What does \_\_\_\_\_ represent?

What would you have to do to \_\_\_\_\_ to get \_\_\_\_\_?

How would \_\_\_\_\_ be different if you \_\_\_\_\_?

### Questions teachers need to ask when observing students (for instructional points)

Does the student use mental math?

Are the students talking and listening to one another?

Are they using math terminology?

Are they restating what is happening during the discussion?

Is the student successful?

What math thinking did the student use?

What strategies are being used by the students?

### Student discourse

Example: "I knew there were four numbers in the set. So I multiplied  $4 \times 5$  to get the total amount. Then I added up the three known numbers and subtracted from 20 to find the fourth number."

### Resources

Accessible Mathematics: 10 instructional shifts that raise student achievement

By Steve Leinwand - Heinemann (2009) - Paperback - 113 pages - ISBN 0325026564

Good questions for math teaching: why ask them and what to ask, grades 5-8

By Lainie Schuster, Nancy Canavan Anderson - Math Solutions Publications (2005) - Paperback - 195 pages - ISBN 0941355691